May 1999

SWAP NEWS

Montana Source Water Assessment Program Update

by Montana Department of Environmental Quality (DEQ)

Note: Beginning with the current issue, SWAP News will feature lead articles that highlight different aspects of the Montana Source Water Protection Program. The focus this month is source water assessment of surface water sources. Proposed topics of future articles include susceptibility assessment, the pass-through grant program, and public reporting. Contact us if you would like to read more about other topics. Also, contact us if you want to be removed from our mailing list.

SOURCE WATER ASSESSMENT FOR SURFACE WATER SOURCES

Issues and Technical Considerations

Streams and reservoirs are highly vulnerable to contamination by chemicals from catastrophic spills and microbes that cause bacterial or viral disease outbreaks. Also, usually a much larger area than ground water sources contributes water to streams and reservoirs. For these reasons the objectives of source water assessment and the methods used differ considerably between surface water and ground water sources.

EPA requires states' to delineate source water protection areas for streams and reservoirs that include entire watersheds to the state border. However, a differential approach that identifies smaller areas for concentrated assessment and protection efforts is allowed. Montana DEQ has proposed this approach in its Source Water Protection Program. Only those sources so close that contamination may reach a water supply before an intake can be closed are considered for source water protection. General land uses, large industrial facilities, and sources of direct discharges will be identified to the watershed extent, however, local management is not proposed for these sources.

DEQ is currently conducting a source water assessment for the City of Havre to demonstrate delineation and assessment methods for surface water sources. Thus far, a Spill Response Region designated for concentrated assessment has been delineated and a preliminary assessment has been completed. Havre's Spill Response Region includes land and water within a one-half mile buffer along the Milk River and its tributaries for a minimum distance of 10 miles upstream from Havre's intake. All sources of contaminants with primary drinking water standards and cryptosporidium have been identified in the Spill Response Region. However, only the potential for spills or leaks of large quantities of chemicals or contamination by microbes and nitrate are assessed in detail.

The greatest threat to Havre's source water is a chemical spill at a highway, railway, or pipeline crossing. The only effective way to control this threat is to develop and implement a detailed emergency plan. Spills of water treatment chemicals at the water plant or diesel at a train refueling station, and contamination from animal wastes at the Hill County Fairgrounds and the Northern Montana Agricultural Experiment Station are other serious threats. Organic chemicals and nitrate are considered to be contaminants of greatest concern.

Land uses and natural conditions in the Milk River Watershed upstream from Havre also impact water quality. Chemical salts accumulated at saline seeps, chemicals and sediments from farmland, and animal wastes from animal feeding operations are flushed into the Milk River by runoff. A strong case can be made that non-point sources such as these affect the quality of water at Havre more than spills in the Spill Response Region. However, there is little that a source water protection program initiated at the community level can do to control these contaminant sources. Instead a state or regional program such as the Total Maximum Daily Load Program is needed. Under this program DEQ considers impacts on drinking water supplies when evaluating proposals for stream or watershed restoration.

⊗

STATUS OF DELINEATION AND ASSESSMENT REPORTS AND SOURCE WATER PROTECTION PLANS

Source water assessment reports by DEQ are in progress for the cities of Havre, Chinook, and Harlem. DEQ also has initiated source water assessments for the Hill County Water Districts and North Havre County Water District.

Source water protection plans have been certified for Montana City School and Sand Coulee Water Users.

⊗

HOW PWSs MIGHT USE DELINEATION AND ASSESSMENT REPORTS

A source water protection plan that addresses significant potential contaminant sources is built on a delineation and assessment report. The source water protection plan must describe how control measures will be implemented for each significant potential contaminant source. It is not enough to simply describe the risk; the plan must describe actions.

DEQ will certify source water protection plans that meet the requirements of the SDWA and the Montana Source Water Protection Program. Certification is necessary in order for the governing body in a county to take formal actions to protect a PWSs source water. A Acertified plan≅ also is needed to obtain money from the state revolving fund (SRF) loan program to implement a source water protection plan. Finally, many operators see Acertification≅ as an achievement that brings recognition to their efforts.

Certification review is not a Arubber stamp≅ process. Certification means a plan meets the intent of congress and the Montana program. A water system must be described sufficiently in a source water protection plan for the reader to understand the entire water system. Susceptibility to identified potential contaminant sources and how the PWS will be protected from those identified threats also must be described. Plan submitters should be prepared to receive and address comments or questions from DEQ following the initial submittal. Not uncommonly, portions of a plan as first submitted will need to be revised to ensure clarity. While this process can be discouraging for those hoping for quick certification, a better plan will almost always result. A community can implement a plan without DEQ certification. This approach might allow the PWS time to gain experience with plan implementation prior to certification review. In a nutshell, the PWS needs to show that they are actively managing significant potential contaminant sources; taking an action that goes much beyond simply submitting a plan to DEQ for review.

⊗

SOURCE WATER PROTECTION TRAINING OPPORTUNITIES

A Source Water Protection training seminar will be part of a two-day workshop on June 16-17 in Forsyth entitled Water & Wastewater Systems: Beyond Operation and Maintenance. For information or to register contact Montana Environmental Training Center at (406) 454-2728.

⊗

UPDATE ON EPA REVIEW OF MONTANA SWAP

Montana's Source Water Assessment program was submitted to EPA Region 8 on January 20, 1999. EPA Headquarters will review one states program from each region concurrent with regional offices (South Dakota was selected from Region 8). Region 8's administrator will review all other state programs, including Montana's, with courtesy reviews by EPA HQ.

Region 8 staff is conducting a technical and adequacy review and plan to have informal preliminary comments to Montana by early summer. Courtesy comments from EPA Headquarters reviewers probably will not be received until later in the summer. The deadline for final EPA approval is November 11, 1999.

In the interim MT DEQ staff are conducting delineation and assessments under the existing approved Wellhead Protection Program.

⊗

SOURCE WATER INFORMATION IN CONSUMER CONFIDENCE REPORTS

Information about source water is an important part of consumer confidence reports required under the 1996 amendments to the Safe Drinking Water Act. Table I-1, provides a list of the report requirements related to source water. Those requirements are highlighted in bold and followed by additional information.

Table I-1: CCR Requirements Related to Source Water Information

Rule/ Guidance Citation	Requirement
∋141.153 (b)(1) CCR guidance - p. 6	**Each report must identify the source(s) of water delivered by the CWS by providing information on: the type of water used (i.e. surface water or ground water), the commonly used name (if any) and the location of the body (or bodies) of water.** For surface water, the water body, such as a river, where the intake is located would be appropriate. The name of the watershed or sub-watershed could also be included. For ground water, the name of the principle aquifer would be appropriate. EPA encourages the use of simple maps to illustrate the extent of each system□s protection area.
CFR 141.153 (b)(2) CCR Guidance - p. 6	**If a source water assessment has been completed, the CCR must:** **1) notify consumers that this information is available, and** **2) tell them how to obtain the information** **Where a system has received a source water assessment from the State, the report must include a brief summary of the system=s susceptibility to potential sources of contamination, using language provided by the State or written by the operator.** Many states will be producing brief reports understandable to the public which summarize the results of the source water assessments, which water systems reference in the CCR. If the source water assessment has not been completed, systems could indicate when that information will be available to the public. Systems are encouraged to include information about specific significant potential sources of contamination in the source water area if they have readily available information from the assessments or other sources such as wellhead management plans, sanitary surveys, watershed assessments, special water quality studies, and other publicly available information.
∋141.153 (d)(4)(ix) CCR Guidance - p. 11	**Each report must include the likely source(s) of detected contaminants to the best of the operator□s knowledge. Specific information regarding contaminants may be available in sanitary surveys and source water assessments and should be used when available to the operator. If the operator lacks specific information on the likely source(s), the report must include one or more typical sources given in the Appendix B of the rule for the detected contaminant. (See Appendix H of this guidance for the list of typical sources).** Even if a source water assessment is not yet complete the state may have preliminary data about potential contamination sources in statewide databases. If information is not available to describe specific point sources (such Sam□s garage), generic classes of contamination sources (such as Agas stations≅) may be described. If none of the typical sources are known

Table I-1: CCR Requirements Related to Source Water Information	
Rule/ Guidance Citation	**Requirement**
	to exist in the source water area, the system can add a footnote to the table, stating that fact.
∋141.153 (e)(1) CCR Guidance - p. 12	**If a system has performed any monitoring, including monitoring to satisfy ICR requirements, which indicate that *Cryptosporidium* may be present in the raw or finished water, the report must include a summary of the results of the monitoring and explanation of the significance of the results**. A sample explanation is provided on page 12 of the guidance.
∋141.153 (h)(1) CCR Guidance - p. 14	**Every CCR must contain a brief explanation about the sources of drinking water and contaminants that may be present in the source water. Systems can either use the language provided in CFR 141.153(h)(1)(i) and (ii) or develop comparable language.** Contaminants that may be present in the source water include microbial contaminants, inorganic contaminants, pesticides and herbicides, organic chemical contaminants and radioactive contaminants. Until specific information is available from a source water assessment, a water system could be considered to be susceptible to these contaminants. Once a source water assessment is available, it may be useful to describe the susceptibility of the system to contamination in terms of these categories.

MT DEQ Contacts:

Joe Meek, Supervisor
Source Water Protection Section
MT DEQ
P.O. Box 200901
Helena, MT 59620-0901
Jmeek@state.mt.us

Russell Levens,
Hydrogeologist
Source Water Protection Section
MT DEQ
P.O. Box 200901
Helena, MT 59620-0901
Rlevens@state.mt.us

Advisory Council Contacts:

Bruce Farling, Trout Unlimited 535-0054
Mike Cobb, Rancher 562-3694
Jack Stultz, DNRC 444-6605
Deb Madison, Fort Peck Tribes 768-5155
Doug Parker, ASARCO 728-8510
Don Skaar, MT FWP 444-5686
Denise DeLuca, Land & Water 721-0354
Roger Noble, Land & Water 257-7200
Joe Steiner, City of Billings 657-0352
Bob Willems, MT Assoc. of CDs 632-5546
Bill O'Connell, MRWS, Inc. 782-6616
Richard Parks, Fishing Outfitters 848-7314
George Algard, MT Dept. of Ag. 444-5400
Shelly Nolan, Havre Water Dept. 265-5215
Starr Sullivan, City of Missoula 523-4888
Roger DeBruyker, State Rep. 452-6537
Marvin Miller, MBMG 496-4155